Labeeb Hasan Zaker

EDUCATION AND INVOLVEMENT

Mechatronics Engineering (GPA-3.875)

MCMASTER UNIVERSITY SEPTEMBER 2018 - APRIL 2023

Relevant courses: Engineering Computation(python), Programming for Mechatronics (C language)

McMaster Eco-Car Club CAVS Programmer

SEPTEMBER 2019 - PRESENT

- Implemented a Matlab code to receive data from the car sensors (Sensor Fusion)
- Collaborated with teammates on developing the ACC (Adaptive Cruise Control) algorithm using Matlab

PERSONAL PROJECTS

BloggersInc | HTML5, Semantic UI, CSS3, JavaScript, JQuery, Node.JS, Express.JS

- Implemented connect-flash package to handle errors properly using flash messages
- Used MongoDB to organize and store non-relational databases of ~30 users, blogs and comments
- Constructed a secure user login form using Passport.JS library

Vehicle Collision Avoidance Program | Python3

- Lead development of an adaptive **Python** program that could detect obstacles, road conditions, and lane markers using **OpenCV**, **NumPy**, **matplotlib** libraries
- Employed **NumPy** to account for **data processing** on arrays of integer coordinates, thus increasing **accuracy** of computer detection results on lanes
- Implemented CV2 library to visualize the detection results on various videos or images

Personal Portfolio | HTML5, Bootstrap4, CSS3, JavaScript, JQuery, Node.JS, Express.JS

- Implemented **CSS** and **JavaScript** to create **animations** and run them only when in **viewport** using **JavaScript** functions
- Improved site-responsiveness by adding Bootstrap4
- Refined communication service by using node-mailer library to handle over a 100 monthly emails

Skills

Front-end: HTML5, CSS3, jQuery Languages: JavaScript, Python, C/C++, Matlab

Back-end: Node.JS, MongoDB, Rest API Frameworks: Bootstrap4, Express.JS, Git